

How do policy entrepreneurs influence policy change? Framing and boundary work in EU transport biofuels policy

James R Palmer

University of Oxford, Keble College, Parks Road, Oxford, OX1 3PG, UK

james.palmer@keble.ox.ac.uk

(01865) 272715

How do policy entrepreneurs influence policy change? Framing and boundary work in EU transport biofuels policy

Abstract

Drawing on in-depth qualitative research exploring EU biofuels policy, I aim to advance understandings of the role and influence of policy entrepreneurs within Kingdon's (2011) multiple streams framework (MSF). Focusing on the contribution to EU biofuels policy made by one entrepreneurial policy official, I analyse the particular discursive techniques this official deployed in seeking to influence EU policy-making, and the wider contextual factors that impinged on those techniques' ability to actually attain policy influence. Persuasive framing is shown to have enabled the entrepreneur to influence initial agenda setting processes, whilst boundary work is shown to have enabled the same official to subsequently defend an existing policy in the face of widespread criticism. Critical interactions between all three streams of the MSF, however, were outside the control of this policy entrepreneur, implying that discursive techniques alone are insufficient to open (or close) policy windows.

Key Words: Biofuels; boundary work; framing; policy change; policy entrepreneurs

EU biofuels policy: Critical moments and the role of the policy entrepreneur

Drawing on in-depth qualitative research exploring EU biofuels policy, I aim here to advance understandings of the role and influence of the policy entrepreneur within Kingdon's (2011) multiple streams framework (MSF). By examining the contribution to biofuels policy of one especially entrepreneurial policy official – to be referred to throughout the article as 'official X' – I seek more specifically to advance understandings of the particular discursive techniques that a policy entrepreneur might deploy in a bid to influence EU policy-making, and the wider contextual factors which impinge on the ability of such techniques to actually attain policy influence.

Biofuels - essentially "renewable fuels derived from biological feedstocks" (Koh and Ghazoul, 2008: 2451) - have proven politically attractive at the EU level because of their purported ability to mitigate greenhouse gas (GHG) emissions, enhance the EU's energy security and stimulate rural development. Controversy over the extent to which these benefits will accrue from biofuel production in practice, however, has existed at least since the passing of the *Biofuels Directive* in 2003 (EC, 2003). The 2009 *Renewable Energy Directive* (RED), which superseded the *Biofuels Directive* by stipulating that 10% of road transport fuel should be derived from renewable resources by 2020 (EC, 2009a), did not resolve this controversy. Rather, in failing to address the potentially negative consequences of indirect land-use change (ILUC), which occurs when biofuel production displaces agricultural activity into new geographical territory, it arguably served only to heighten many actors' sustainability concerns.

Against this backdrop, the specific empirical case I explore here hinges on the role and influence of official X in relation to two separate, critical moments in the development of EU biofuels policy between 2003 and 2010. The first of these moments is found in the passing of 2003's *Biofuels Directive* (EC, 2003), which established indicative targets for

biofuel blending in the road transport sector across all EU member states. Whilst this policy served as a flagship component of the EU's wider climate change mitigation efforts in the early years of the twenty-first century, for many it nonetheless represents a questionable initiative in light of both alternative applications of biomass, and of alternative measures for reducing the carbon footprint of the road transport sector (RCEP, 2004; Palmer, 2010). The question to be explored in this first part of the empirical case therefore concerns *how* official X contributed to the cultivation of near-unanimous enthusiasm for a transport biofuels mandate in 2003.

The second critical moment that I address is found in the decision not to take legislative action to remediate the consequences of ILUC following the passing of the RED in 2009. Given in particular that ILUC might compromise biofuels' ability to abate greenhouse gas (GHG) emissions, the European Commission was obliged to investigate the seriousness of the problem and produce a full impact assessment by the end of 2010, with remedial legislation also to be proposed if appropriate. Yet, despite vociferous calls for action from a wide range of governmental¹ and non-governmental actors (e.g. Birdlife *et al.*, 2009), no proposal emerged by this deadline.² The question to be explored in this second part of the empirical case therefore concerns how official X contributed, even in the face of widespread pressure to act, to the European Commission's unwillingness to address ILUC at this time.

The remainder of this discussion proceeds as follows. First, the theoretical approach and research methods deployed in this study are outlined. Then I provide an assessment of the discursive techniques that were deployed by official X in a bid to influence policy at each

¹ Many EU member states, including the UK and the Netherlands, called for legislative action in responding to a European Commission public consultation in 2010.

² Only in October 2012 did the European Commission publish a full Impact Assessment into ILUC (EC, 2012).

of the two critical moments identified above, before attempting to establish the real extent of official X's influence in each case, by reflecting on the wider contextual factors that might also have impacted on the persuasiveness of his discursive arguments. Finally, I reflect on the broader implications of my findings for existing theories of the role of the policy entrepreneur, and for future research designed to explore the role of policy entrepreneurs in EU policy-making.

Theoretical framework and research design

The policy entrepreneur in the MSF

Building on Cohen, March and Olsen's (1972) 'garbage can model of organisational choice', Kingdon's (2011) MSF envisages political decision-making as the product of events occurring in three independent 'process streams'. The first of these, a 'problems' stream, includes "more or less systematic indicators...dramatic events...or feedback from the operation of existing programs" (Kingdon, 2011: 90) that come to the attention of decision-makers as requiring action of some kind. The second, a 'policies' stream, comprises a community within which ideas and proposals 'float around', "much as molecules floated around in what biologists call the primeval soup" (*ibid*: 116). Thirdly and finally, a 'politics' stream incorporates "such things as public mood, pressure group campaigns, election results...and changes of administration" (*ibid*: 145). According to this framework, only in critical moments when an open 'policy window' is present can the three process streams couple together, thereby enabling significant policy change to occur.

Policy entrepreneurs – actors possessed of scarce rhetorical skills and an exceptional dedication to achieve desired ends – represent actors of allegedly high causal significance in the MSF. For Kingdon (2011: 205), they are said to "push for one kind of problem definition rather than another", and to "soften up the mass public, specialised publics and the policy

community itself” to particular ideas. Perhaps more importantly, they are also argued to help couple together the three process streams of the MSF by having “their pet proposals or their concerns about problems ready, and push[ing] them at the propitious moments” (*ibid*: 205). Under these auspices, the concept of the policy entrepreneur has contributed to perceptive analyses of EU policy processes across a diverse range of issue-areas, including common agricultural policy reform (Ackrill and Kay, 2011), common foreign and security policy (Krause, 2003), and the higher education agenda (Corbett, 2005).

Theorising entrepreneurial influence: The analytical potential of ‘framing’ and ‘boundary work’

Important theoretical questions remain to be addressed however, in relation to both the precise nature of the *discursive strategies* that policy entrepreneurs actually use to couple process streams together, and with respect to the wider contextual factors that impinge on such strategies’ ability to actually attain policy influence in specific cases. With regard to strategies for instance, fertile ground exists for building upon Kingdon’s (2011) notions of ‘investing considerable resources’, ‘developing information’ about problems, and ‘softening up’ the political system. In relation to influence meanwhile, ambiguity persists over the nature of entrepreneurs’ interactions with other variables in the policy process, as well as over the *type* and *scale* of policy changes that entrepreneurs can bring about in different circumstances. Following Ackrill *et al.* (2013), we might also ask whether policy entrepreneurs could both facilitate and *preclude* policy change, either by coupling process streams together, or by preventing them from coupling, at otherwise propitious moments.

In order to address these questions, I seek to build upon Kingdon’s (2011) ideas by applying the theoretical concepts of ‘framing’ from interpretive policy analysis (see Rein and Schön, 1991) and ‘boundary work’ from science and technology studies (see Gieryn, 1983; Jasanoff, 1987) to the MSF. Framing, understood as a “way of selecting, organizing,

interpreting, and making sense of a complex reality so as to provide guideposts for knowing, analysing, persuading and acting” (Rein and Schön 1991: 263), serves to bring clarity and focus to political debates by virtue of the boundaries that it implicitly draws around complex, multi-faceted issues. In short, this strategy serves to render ‘knowable’ not just problems, but also potential solutions to those problems, making the contingent and the contestable seem common sense and natural. Boundary work, by contrast, is understood to involve the rhetorical “attribution of selected characteristics to the institution of science... for purposes of constructing a social boundary that distinguishes some intellectual activities as ‘non-science’” (Gieryn, 1983: 782). Consequently, its significance resides not in its potential to dictate the nature of problems or solutions, but rather in its ability to distinguish between more or less authoritative sources of evidence and expertise upon which to base policy decisions, especially where the problems and solutions in question are complex or controversial.

Rhetoric, persuasion and argument have of course long been recognised as important variables in policy-making processes of all kinds (Fischer and Forester, 1993; Majone, 1989; Pellizzoni, 2001). Framing and boundary work serve, however, as two especially well-defined examples of discursive techniques that strategic and committed political actors – and most obviously policy entrepreneurs – could deploy in a bid to help drive policy developments along particular vectors. In this respect they offer a potentially valuable means of enhancing our understanding of the processes that can lead policy windows to open, or see them remain closed. With this in mind, the purpose of the discussion that follows is to explore the analytical utility of both concepts in relation to the specific actions and policy influence of official X in the realm of EU biofuels policy, focusing on each of the two critical moments identified above in turn. Before undertaking this task, however, a brief word now follows on the study’s materials and methods.

Research materials and methods

The data I present in the discussion that follows has been derived from 33 semi-structured interviews, conducted with a range of actors involved in debates about EU biofuels policy and indirect land-use change, as well as in-depth analysis of key policy proposals, scientific reports, public consultation responses and other relevant documentation and grey literature. Interviews, which all lasted between 40 and 90 minutes, were conducted with policy-makers at the EU and member state levels (9), one Member of European Parliament, expert scientists and consultants (12), representatives of both the biofuel and fossil fuel industries (6), and campaigners working for environmental non-governmental organisations (NGOs) (5). For ethical reasons, the anonymity of all interviewees has been preserved in the text that follows.³

Making the case for biofuels: Policy entrepreneurship as persuasive framing?

In formal terms at least, plans to expand the use of biofuels in Europe's road transport sector were first articulated by the European Commission in a 2001 White Paper on transport (EC, 2001). Citing what it called the "inadequacy of...measures taken to date both to reduce greenhouse gas emissions from motor vehicles and to reduce the European Union's energy dependency" (*ibid*: 82), the Commission vowed in this document to encourage the use of biofuels through a combination of indicative targets and tax reduction schemes. Furthermore, it also went on to purport that "the production of raw materials for biofuels may be of particular interest under the Common Agricultural Policy for creating new economic resources and preserving employment in the agricultural community" (EC, 2001: 87). Biofuels therefore gained credibility in Europe at this time not only because of their purported ability to mitigate climate change and enhance energy security, but also because

³ In the case of European Commission officials, adhering to this principle importantly necessitates withholding details of each interviewee's Directorate General (DG).

they were deemed likely to generate income for the bloc's agricultural sector. Such a 'tripod-style' approach to promoting biofuels did not emerge automatically, however. Rather, from the perspective of Kingdon's (2011) multiple streams framework (MSF), the tripod can be said to have resulted from the active *coupling* of biofuels – one idea circulating in the EU's policy 'primeval soup' at the outset of the twenty-first century – with specific issues circulating in the EU's 'problems stream' at this time.

The coupling of biofuels and climate change might of course seem entirely reasonable, particularly given the urgency with which solutions to the transport sector's climate change impacts were already being sought in Europe. The Commission's 2001 White Paper on transport, for instance, had forecast that total EU transport emissions would grow by approximately 50% between 1990 and 2010 if no action was taken to reduce them (from c.739 million tonnes of CO₂ equivalent to c.1.11 billion tonnes) (EC, 2001). Road transport was singled out as a crucial area to address, not least because it accounted for 84% of overall transport emissions (*ibid*: 10). Moreover, transport compared unfavourably with all other sectors in Europe in respect of its forecast GHG emissions up to 2020 (Figure 1).

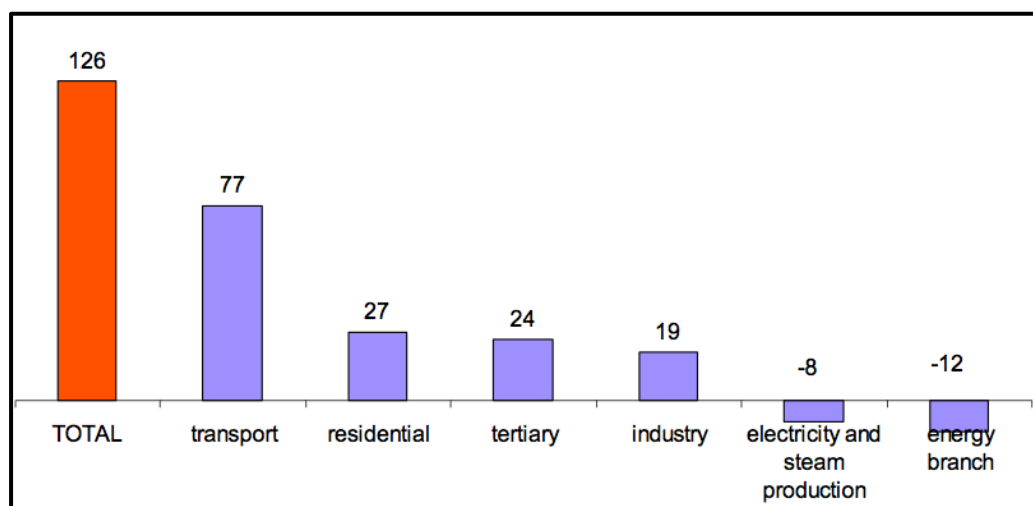


Figure 1: Forecast change in EU25 CO₂ emissions by sector, measured in millions of tonnes per year, 2005-2020 (Source: EC, 2007: 3).

Arguments deployed by those making the case specifically for biofuels as a solution to climate change prior to 2003, however – including official X - were notable for their tendency to subscribe to a quite specific interpretation of road transport’s ‘climate change question’, on two levels. Firstly, they depicted biofuels as the only *readily available* means of reducing road transport GHG emissions. This was not necessarily a novel contestation; indeed it had already been articulated in the Commission’s 2001 White Paper, which declared that “the most promising forms [of renewable energy in transport] are biofuels in the short and medium term, natural gas in the medium and long term and hydrogen in the very long term” (EC, 2001: 86).⁴ Continuing to highlight the immediate GHG mitigation capabilities of biofuels in this way nonetheless served as a powerful argument before the passing of the *Biofuels Directive*, particularly when viewed alongside the imminent projected growth in transport emissions shown in Figure 1.

At a more fundamental level, actors coupling biofuels to climate change – again including official X – were also notably depicting road transport GHG emissions as extremely difficult to reduce *without* biofuel blending. The nature of this second type of argument was neatly summarised, for instance, in the words of a campaigner working for a prominent, Brussels-based environmental NGO:

“If you want to reduce emissions in the transport sector you have to make people pay even more for their fuel and make them pay more for bigger cars *and* make them pay for the roads they are *using*...but all of those are horribly unpopular. So this was like “oh great! Give them a green fuel, they can all go on driving as before...and they’ll also save the planet”.” (Interview, NGO Campaigner, 2010)

⁴ Several years after the *Biofuels Directive* had been passed, the Commission continued to rely on this type of argument, stating in a 2007 progress report, for instance, that biofuels represented “the only direct substitute for oil in [the transport sector]...available on a significant scale” (EC, 2007: 2).

Notwithstanding the obvious political appeal of this argument, realistic alternative measures for reducing road transport GHG emissions did in fact exist in Europe at the outset of the twenty-first century. Indeed, in some cases – witness for instance the Commission’s pioneering fuel efficiency regulation (EC, 2009b) – such alternatives have even been successfully implemented (although not without controversy). Moreover, and at a broader level, the argument that the most appropriate use of Europe’s biomass resources was in the transport sector, rather than in heat or electricity generation, was also far from uncontested at this time (Clift and Mulugetta, 2007; DTI, DFT and DEFRA, 2007; RCEP, 2004).

Despite these caveats, in the years preceding the passing of the *Biofuels Directive*, official X was deemed by many interviewees to have played a pivotal role in reinforcing a narrow view of these issues, one within which biofuels constituted the *only* feasible means of mitigating road transport GHG emissions. As one of official X’s colleagues in the Commission explained in an interview:

“The argument that was always used in transport was “oh, it’s too difficult.” And then [official X] comes along: “Oh no but biofuels can help...this is the *easy* way to reduce GHG emissions”.” (Interview, Commission Official, 2011)

In view of the alternatives that did in fact exist, the same official went on to state that:

“It was completely turning the argument on its head and [he] got away with it...because [he] managed to convince people that it was all terribly difficult and that you couldn’t do anything else.” (Interview, Commission Official, 2011)

At a broader level moreover, official X’s arguments were also seen by many interviewees as crucial in drawing together each of the three aspects of the aforementioned ‘tripod’ to form a more resilient and defensible *overall* picture of biofuels, as a technology capable of tackling multiple problems simultaneously. As one Commission official explained, the rhetorical power of this argument was formidable:

“[Official X] had a strategy at the beginning, which was – you know – biofuels policy was based on climate, on energy security and on rural development – three legs. And the thing was that whenever you said “oh, but this biofuel doesn’t do x”, he would say “oh, but it does y and z”.” (Interview, Commission Official, 2011)

Such discursive argumentation arguably represents a classic instance of what Rein and Schön (1991) would term framing, whereby official X selectively interpreted and drew boundaries around the otherwise complex reality of prevailing problems and potential solutions circulating in debates about EU road transport emissions. By framing road transport sector GHG emissions as both more urgent and more difficult to reduce than other types of emissions, and biofuels as a technology capable of reducing emissions immediately (whilst solving additional problems at the same time), official X helped to couple what Kingdon (2011) would term the ‘problems’ and ‘policies’ streams in Europe at this time. Whilst he was certainly not the only actor who subscribed to them, official X’s articulation of these framings *was* deemed by many interviewees to have had a disproportionate impact on the ultimate emergence of the *Biofuels Directive*. As one Commission official put it:

“[F]rankly if we could stop [biofuels] dead tomorrow that would be the right thing to do...we should never have got into this mess in the first place; it’s because [official X] was too eloquent that we did.” (Interview, Commission Official, 2011)

To grasp the full implications of this first case for existing theoretical understandings of policy entrepreneurs, it will of course be necessary to reflect more broadly on the wider contextual factors – beyond official X’s persuasive framing alone – that might also have facilitated the opening of a policy window enabling the *Biofuels Directive*’s emergence. I will address these questions later. Now, however, I move on to assess the role of official X in a second critical moment in EU biofuels policy – one found in the European Commission’s

decision not to take regulatory action designed to mitigate the effects of indirect land-use change.

Defending the status quo: Policy entrepreneurship as boundary work?

In the years following the passing of the *Biofuels Directive*, biofuels' image deteriorated significantly as a range of actors began to call their sustainability credentials into question (Dunlop, 2010; Palmer, 2010).⁵ Indirect land-use change (ILUC) undoubtedly forms the most complex and controversial issue to have emerged in this period. Briefly, it occurs when biofuel feedstocks are cultivated on pre-existing agricultural land, thereby displacing agricultural production (for instance for food or animal feed) into new geographical territory. Despite the fact that ILUC engenders a potentially wide range of impacts, scientific assessments of its scale have focused almost exclusively on the GHG emissions that it might generate (Fargione *et al.*, 2008; Melillo *et al.*, 2009; Searchinger *et al.*, 2008).⁶ In a similar fashion, assessments of ILUC conducted in Brussels since the passing of the *Renewable Energy Directive* (which obliged the Commission to report on the issue by the end of 2010), have also been premised on a framing of this problem as exclusively comprising a carbon accounting error (Palmer, 2012, 2014; Levidow, 2013).⁷

⁵ Influential contributors to this change of image in the UK were reports published by the *House of Commons Environmental Audit Committee* (EAC, 2008) and the *Royal Society* (2008).

⁶ Searchinger *et al.* (2008) claimed that ILUC could cause biofuels to generate up to twice as many GHG emissions over 30 years as their fossil fuel counterparts.

⁷ The European Commission was aware of ILUC prior to the passing of the *Renewable Energy Directive*, but did not include formal measures to counter its effects in that legislation. Whilst this represents an intriguing instance of 'non-decision-making', it unfortunately falls outside the remit of data available here, which focuses on debates taking place *after* the RED's passing.

Since ILUC propagates through global agricultural markets, it is impossible to observe any ‘cause-and-effect’ chain proving that biofuel production in one location has irrefutably brought about land-use change in another. As a result, the vast majority of scientific evidence made available to policy-makers charged with addressing the problem has been derived from equilibrium modelling. The European Commission itself funded three official modelling studies of this nature in the immediate aftermath of the passing of the RED, which sought: to quantify the global trade and environmental impacts of the EU’s biofuels mandate (Al-Riffai *et al.*, 2010); to compare the marginal ILUC emissions associated with different biofuels as estimated by a range of different models (Edwards *et al.*, 2010); and to compare the estimated impacts of EU biofuels targets on agricultural markets and land-use across three widely used agro-economic models (Blanco-Fonseca *et al.*, 2010). Since each of these reports subscribed to different assumptions about the nature of relationships linking land-use change patterns to wider shifts in the demand for, and prices and yields of, crops, their projections of the scale of ILUC that would be brought about by EU biofuels targets differed markedly. Edwards *et al.* (2010) present estimates of the total area of land-use change that would result from the *Renewable Energy Directive*’s implementation, as forecast by a range of modelling studies. For bioethanol, they find that estimates vary between 107,000 and 863,000 hectares for every million tonnes of oil equivalent (Mtoe) produced, whilst for biodiesel they find estimates which range from 242,000 to 1.9 million hectares per Mtoe. In light of these vastly divergent projections, debates about the true significance of ILUC in Brussels came - from 2010 onwards - to play out through protagonists’ attempts to establish the relative credibility of the wide range of knowledge claims emanating from equilibrium-modelling studies.

Intriguingly, as was the case in debates about biofuels taking place prior to the passing of the *Biofuels Directive* in 2003, many interviewees again identified the discursive

strategies deployed by official X as having proved particularly influential in the face of this uncertainty. At one level, official X – like many other actors in the ILUC debate – pinpointed poor quality data inputs and erroneous assumptions as a major limitation of much equilibrium modelling work. In itself this is not remarkable; all equilibrium modelling relies on a large number of assumptions, both because certain basic parameters are not perfectly known (for instance the total area of arable land that is available globally), and because relationships among interdependent variables are not fully understood (for instance between commodity prices and average yields). Importantly, however, one might not only question the *reliability* of the data and assumptions being used to represent parameters and relationships in an equilibrium model; at a more fundamental level it is also possible to argue that such relationships are not of a linear or otherwise predictable nature, and thus not amenable to modelling in the first place. Under these conditions, one would not be able to distinguish objectively between ‘reliable’ and ‘unreliable’ data or assumptions.

With these points in mind, it is notable that official X’s views, as expressed in an interview provided for this research, appear to have subscribed to the assumption that better data inputs *would* lead to improvements in the accuracy of equilibrium models’ projections:

“Are these [modelling] tools up to it? No... but a big problem is data. The estimates I’ve seen for the global area of cropland in 2000 vary from 1.2 to 2 billion hectares, and that’s just one of the basic pieces of data.” (Interview, Official X, 2010)

According to many interviewees, moreover, by pointing to divergences in the quality of data underpinning all existing ILUC studies – whether undertaken by the European Commission or independently – official X was also able to depict the broader *field* of ILUC modelling as exhibiting a trend towards providing *lower* projections of the seriousness of ILUC as knowledge ‘developed’ over time. Indeed, Official X himself remarked of ILUC modelling work being undertaken in American research institutes in precisely this manner:

“I think it’s interesting that the American numbers are going down, so the [Argonne National Laboratory⁸] work for example is now down, in a calculation method which is equivalent to ours and with assumptions equivalent to ours.” (Interview, Official X, 2010)

Similarly, a Member of the European Parliament who had chaired a public debate on ILUC in 2010 described how official X had deployed a similar form of argument in that setting:

“[Official X] was deliberately - in presentations - using studies with years attached, and giving the feeling, “the more we know, the lower the value is”. And he *knows* that’s not true. Because it depends on...the process, it depends on the region. And he deliberately chose the right products and regions to give the idea that it was declining...” (Interview, Member of European Parliament, 2011)

Where equilibrium modelling work offered outputs contradictory to this declining trend, official X – again, like many other actors – was able to critique it on the basis that its calculations were underpinned by poorer quality data and assumptions. Of one piece of ILUC modelling work that had been sponsored by a consortium of environmental NGOs (Croezen *et al.*, 2010), for instance, official X remarked:

“I was very disappointed in [that] report that came out recently, which is obviously [three non-governmental organisations] trying to engage with the science. I don’t think it’s... really all that scientific or all that objective. I’ve asked for the data that lie behind the calculations.” (Interview, Official X, 2010)

In order to make these types of claims in an authoritative manner, official X needed to demonstrate many of the characteristics associated with Kingdon’s (2011) original definition of the policy entrepreneur – particularly by ‘investing considerable resources’ in developing his own understanding of the equilibrium modelling process, and in keeping abreast of fast-moving developments in the relevant scientific literature. The words of one expert scientist –

⁸ Tyner *et al.* (2010).

an individual with first-hand experience of discussing ILUC with official X in Brussels – attest to this extreme level of dedication:

“He’s not a scientist, but he reads every source of information he can, and he picks out little quotes... you know sound bites from each one, to come out with at the right moment.”

(Interview, Expert Scientist, 2010)

The discursive strategy deployed in this case by official X arguably goes beyond Kingdon’s (2011) description of policy entrepreneurs as actors who ‘develop information’ about problems, ‘soften up the policy community’ and ‘push pet proposals at propitious moments’. Instead, it comprises a nuanced form of boundary work (Gieryn, 1983) in which ‘scientific’ status is – strategically in the eyes of many interviewees – applied to certain examples of equilibrium modelling and not others, under the auspices of judgements of the ‘quality’ of those studies’ respective data and assumptions. Such boundary work does not, of course, explain how the ‘quality’ of data is itself to be determined, nor legislate for the possibility that even ostensibly accurate data might only prove accurate in representing complex, non-linear relationships at a given point in space and time. Perhaps most importantly, neither does it imply that official X’s arguments are any less credible than those of other actors in the ILUC debate with a countervailing point of view.⁹ Even so, given the Commission’s failure to propose legislation designed to tackle ILUC in late 2010, official X’s boundary work does appear in this case to have proven influential. This second part of the empirical case therefore suggests that policy entrepreneurs might successfully influence policy developments – in this case precluding a policy window from opening – by imposing their interpretations of the boundary between scientific and unscientific knowledge upon otherwise complex and

⁹ Indeed, the point of this analysis is not to establish who was ‘right’ or ‘wrong’ about ILUC; uncertainties over the very *nature* of the relationships linking global trade and land-use change patterns preclude the definitive identification of ‘correct’ or ‘incorrect’ points of view. The aim here is simply to examine the discursive techniques through which one dominant perspective on the significance of ILUC was established.

uncertain policy debates (and thus by determining the type and scope of evidence upon which policy decisions – or ‘non-decisions’ – are ultimately based).

Establishing influence: Policy entrepreneurship in wider context

In the previous sections I have outlined two distinct discursive strategies that were deployed by an influential policy entrepreneur at critical moments in debates over EU biofuels policy. In each case however, questions remain over the actual *extent* of the influence that this entrepreneur’s discursive activity exerted over EU policy-making, as indeed they do over our capacity to verify that influence in the context of a range of other factors. Indeed, following Kingdon (2002: 97), we must ultimately acknowledge that whilst public policymaking “does have a sort of structure”, there is also “plenty of room for complexity, uncertainty, fluidity, and residual randomness”. Whilst generalizable conclusions are therefore difficult to draw, the two vignettes presented here nonetheless suggest that the concepts of framing and boundary work can productively enhance the analytical purchase of Kingdon’s (2011) ideas relating to the role and influence of the policy entrepreneur.

As outlined above, official X’s careful framing of road transport GHG emissions as particularly difficult to reduce, and of biofuels as a means of immediately reducing such emissions (whilst solving additional problems at the same time), was identified by many interviewees as crucial in contributing to the passing of the *Biofuels Directive*. Here we might therefore conclude that persuasive framing by a policy entrepreneur was critical in coupling Kingdon’s ‘policies’ and ‘problems’ streams, and ultimately opening a policy window. Yet from another perspective the influence of such careful framing of problems and policies might reasonably be *expected* to command a disproportionate influence over political agenda-setting, precisely because this is the only ‘phase’ of the policy process that does not prescribe a formal role for scientific evidence (Keller, 2009). Such a conclusion would sit comfortably, for instance, with Stone’s (1989: 282) view of agenda setting as a process in which “political

actors use narrative story lines and symbolic devices to manipulate so-called issue characteristics, all the while making it seem as though they are simply describing facts”.

If persuasive framing *is* routine during the agenda setting ‘phase’ of the policy process, the emergence of the *Biofuels Directive* can only be fully explained by pinpointing wider events or conditions that were predisposed towards that framing, thus enabling a policy window to actually open. The most likely variable to fulfil such a remit in this case is, arguably, to be found in what Kingdon (2011) would term the ‘politics’ stream, in the form of contemporaneous debates about reform of the Common Agricultural Policy (CAP). Specifically, in the context of the imminent accession of ten new member states to the EU in 2004, proposals for CAP reform had raised concerns about policy-makers’ ability to continue to ensure an adequate income for farmers in many parts of Europe. Since a biofuels mandate promised to provide an alternative source of income to European farmers, it spoke directly to these concerns. Whilst persuasive framing by a policy entrepreneur was therefore crucial in successfully coupling ‘problems’ and ‘policies’ to give *shape* to an emergent policy window in the run up to 2003, it was arguably only in the context of propitious conditions provided by contemporary developments in the EU’s ‘politics’ stream that such a window could actually be prised open. Put differently, whilst framing might well serve as a “powerful [way] of changing the prevailing perspective on an issue” (Princen, 2013: 865), in and of itself this strategy may not have sufficient capacity to provoke substantial policy change in the form of an entirely new piece of legislation like the *Biofuels Directive*.

Meanwhile, the use of a nuanced form of boundary work by official X in debates over indirect land-use change (ILUC) was identified by many interviewees as a significant factor in the European Commission’s ultimate failure to propose remedial legislation addressing this matter in late 2010. Far from provoking substantial policy change, this critical moment therefore effectively witnessed policy *inertia*, as the biofuels policy ‘status quo’ was

successfully defended. More significantly perhaps, and also in contrast to the events outlined above, this second critical moment involved the influence of a policy entrepreneur not over agenda-setting, but rather over a debate concerned with the evaluation of an *existing* policy's effectiveness and impacts. If, as Keller (2009) claims, this later, more evaluative 'phase' of the policy process affords a clearer and more formal role to the application of scientific evidence than is common in agenda-setting, discursive strategies such as boundary work - oriented as it is towards the interpretation of formal scientific evidence - might also be regarded as routine.

Consequently, it is again necessary to look elsewhere for factors that might permit a full explanation of the lack of policy change that characterised this second critical moment in EU biofuels policy. Several factors emanating from the 'politics' stream can be singled out as worthy of attention in this respect. One comprises the novel presence – at least by comparison with 2003 – of a well developed and increasingly powerful biofuels industry, one whose very existence owed much to the earlier passing of the *Biofuels Directive*. The significance of this development is well articulated by one *European Environment Agency* official:

“They’ve built up an industry, which they are kind of reluctant to... drop, ... and obviously there’s now really big players involved like BP, Shell and so on. *They* all have interests now, they’re really lobbying very heavily.” (Interview, European Environment Agency Official, 2010)

Another factor can be found in the status of ILUC as a phenomenon whose occurrence – despite being associated with potentially deleterious effects – is ultimately inconsequential to the material substance of biofuels as an end product. As Ponte and Daugbjerg (2015) make clear, World Trade Organisation (WTO) rules permit the restriction of international trade only in cases where variable production processes lead to materially

detectable variations in the same commodity. Since biofuels' ILUC impacts are indistinguishable at the point of use, any penalty or disincentive applied to biofuels associated with ILUC could theoretically be interpreted by producer countries as an illegal barrier to trade. In short, concerns about a possible WTO complaint may in themselves have led the Commission to decide against proposing regulation addressing ILUC in late 2010.

A final relevant factor, meanwhile, can be found in the nature of official X's institutional position, situated at the heart of the biofuels policy community in Brussels. In the first instance, a central position afforded official X more frequent opportunities to participate in political discussions (both formal and informal, public and private) relating to ILUC than actors outside of the policymaking community, whose views of the issue may have been different. Equally important, however, was official X's unusually long period of service in the same post within the Commission (constituting a lack of 'administrative turnover' in Kingdon's (2011) parlance). Such long service may have led official X's views on biofuels to become especially entrenched; it would also have ensured that he outlasted many more senior political figures within the Commission who engaged with biofuels policy in the years leading up to the emergence of ILUC as a political controversy. Given that many of these figures are - in the words of one interviewee - "at the mercy of the information they're given by their officials"¹⁰, official X's long service could have caused his framings and interpretations of ILUC to be well represented not just in debates taking place between the Commission and other actors, but at higher levels within the Commission too.

When combined with the presence of a powerful biofuels industry and concerns over WTO compliance, official X's longstanding occupation of the same role within the Commission would likely have made it difficult for a wider range of actors disposed of

¹⁰ Interview, Commission Official, 2010

alternative views of ILUC to exert an influence over debates about this problem between 2009 and 2010. In short, official X's boundary work in this case may well have been essential in precluding policy change from occurring, but in and of itself it was not sufficient to prevent a policy window from opening that could nonetheless have permitted such change to occur – for instance in the form of legislation designed to mitigate ILUC's effects. Rather, it was the combination of such boundary work with events and conditions prevailing in the politics stream that ultimately led to the observed lack of policy change in this second part of the case.

Conclusions: The analytical contributions of framing and boundary work

Drawing on Kingdon's (2011) 'multiple streams framework' (MSF), I have here presented an analysis of two critical moments in the history of EU biofuels policy. By applying the concepts of 'framing' and 'boundary work', I have sought to advance theoretical understandings of the role and influence of the policy entrepreneur – an actor of special causal significance in the MSF. I have documented how process stream coupling was achieved through one influential Commission official's use of persuasive framing (Rein and Schön, 1991), pertaining both to biofuels and to the problems that they were supposed to be solving. Following Heclo (1974: 307), this entrepreneur's actions can be said to have exemplified the view that "sometimes, a choice has been made prior to canvassing alternatives and this has been sent out, not only to do battle with other alternatives, but to find a problem." Even whilst this official's persuasive framing was pivotal in giving shape to an emergent policy proposal however, an actual policy *window* could only be opened because this proposal sat comfortably with additional, favourable developments in the EU's 'politics' stream – developments residing well outside the remit of any single entrepreneur's control. Furthermore, I documented how a single policy entrepreneur was able to *prevent* rather than promote policy change in the face of concerns over indirect land-use change, specifically

through the use of a nuanced form of boundary work (Gieryn, 1983). However, official X's boundary work met with apparent success in this case only because of his prominent institutional position, his relative permanence within the policy community, and the novel presence of an increasingly powerful biofuels industry in the EU's politics stream.

Overall, these findings suggest that theoretical tools from interpretive literatures, such as framing and boundary work, can enhance the analytical purchase of Kingdon's (2011) concept of the policy entrepreneur. In this respect, the analysis does not simply describe specific discursive strategies that might potentially be deployed by a policy entrepreneur (framing and boundary work); it also suggests that these strategies may be conducive to the cultivation of policy influence only in particular directions, and even then only at particular types of moments during the policy process. More specifically, persuasive framing might prove influential as a means of opening a policy window during agenda-setting, when scientific evidence plays at most a partial and informal role in making decisions. Boundary work, meanwhile, may be more effective at preventing a policy window from opening during implementation and evaluation, where debates about the consequences and efficacy of an existing policy are almost always based upon scientific evidence. In addition to these points moreover, the analysis also suggests that discursive strategies such as framing and boundary work are useful to entrepreneurs principally as a means of controlling the interactions of only *two* out of the three streams of Kingdon's (2011) MSF – 'problems' and 'policies'. In both cases outlined here, events and conditions prevailing in the politics stream - whilst essential in enabling observed policy outcomes to take place - were not amenable to the control of a single policy actor such as official X. In the absence of serendipitous combinations with critical elements of this politics stream therefore, any policy entrepreneur's efforts to open (or close) a policy window through framing or boundary work are unlikely to prove successful.

Acknowledgements

This research was carried out whilst I was at the Department of Geography, University of Cambridge, and was supported by the UK Economic and Social Research Council [ES/GO13195/1]. I am grateful to all the interviewees who contributed to the study, as well as to Susan Owens and Michael Bravo for their feedback on earlier versions. I am also indebted to four anonymous reviewers for their constructive comments. All remaining errors are entirely my own.

References

- Ackrill, R. and Kay, A. 2011. 'Multiple streams in EU policy-making: the case of the 2005 sugar reform.' *Journal of European Public Policy* **18**(1): 72–89.
- Ackrill, R., Kay, A., Zahariadis, N. 2013. 'Ambiguity, multiple streams, and EU policy.' *Journal of European Public Policy* **20**(6): 871-887.
- Al-Riffai, P., Dimaranan, B. and Laborde, D. 2010. *Global Trade and Environmental Impact Study of the EU Biofuels Mandate, Final Report, March 2010*. International Food Policy Research Institute, Washington, D.C.
- Birdlife European Division, European Environmental Bureau, FERN, Friends of the Earth Europe, Oxfam International, Transport and Environment. 2009. *Biofuels - Handle With Care: An analysis of EU biofuel policy with recommendations for action*. Birdlife European Division, Brussels.
- Blanco-Fonseca, M., Burrell, A., Gay, H., Henseler, M., Kavallari, A., M'Barek, R., Pérez-Domínguez, I. and Tonini, I. 2010. *Impacts of the EU biofuel target on agricultural markets and land use: A comparative modelling assessment*. European Commission Joint Research Centre, Institute for Prospective Technological Studies, Seville, Spain.

- Clift, R. and Mulugetta, Y. 2007. 'A Plea for Common Sense (and Biomass).' *The Chemical Engineer*, **October**: 24-26.
- Cohen, M., March, J. and Olsen, J. 1972. 'A garbage can model of organizational choice.' *Administrative Science Quarterly* **17**: 1-25.
- Corbett, A. 2005. *Universities and the Europe of Knowledge: Ideas, Institutions and Policy Entrepreneurship in European Union Higher Education Policy, 1955-2005*. Palgrave Macmillan, Basingstoke.
- Croezen, H.J., Bergsma, G.C., Otten, M.B.J. and van Valkengoed, M.P.J. 2010. *Biofuels: Indirect land use change and climate impact*. CE Delft, Delft, NL.
- DTI, DFT and DEFRA. 2007. *UK Biomass Strategy*. Department for Environment, Food and Rural Affairs, London.
- Dunlop, C.A. 2010. 'The temporal dimension of knowledge and the limits of policy appraisal: biofuels policy in the UK.' *Policy Sciences* **43**(4): 343–363.
- EAC. 2008. *Are biofuels sustainable? First report of the session 2007-2008, HC 76-1*. Environmental Audit Committee, The Stationery Office, London.
- EC. 2001. *European transport policy for 2010: Time to decide*. COM (2001) 730 final. European Commission, Brussels.
- EC. 2003. 'Directive 2003/30/EC of the European Parliament and of the Council of 8th May 2003 on the promotion of the use of biofuels or other renewable fuels for transport.' *Official Journal of the European Union* **L123**: 42-46, 17th May. European Commission, Brussels.

- EC. 2007. *Biofuels Progress Report: Report on the progress made in the use of biofuels and other renewable fuels in the Member States of the European Union*. COM (2006) 845 final. European Commission, Brussels.
- EC. 2009a. 'Directive 2009/28/EC of the European Parliament and of the Council of 23rd April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.' *Official Journal of the European Union* **L140**: 16-61, 5th June. European Commission, Brussels.
- EC. 2009b. 'Regulation (EC) 443/2009 of the European Parliament and of the Council of 23rd April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO₂ emissions from light duty vehicles.' *Official Journal of the European Union* **L140**: 1-15, 5th June. European Commission, Brussels.
- EC. 2012. *Proposal for a Directive of the European Parliament and of the Council amending Directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Directive 2009/28/EC on the promotion of the use of energy from renewable sources*. COM (2012) 595 final. European Commission, Brussels.
- Edwards, R., Mulligan, D. and Marelli, L. 2010. *Indirect Land Use Change from increased biofuels demand: Comparison of models and results for marginal biofuels production from different feedstocks*. European Commission Joint Research Centre, Ispra, Italy.
- Fargione, J., Hill, J., Tilman, D., Polasky, S. and Hawthorne, P. 2008. 'Land Clearing and the Biofuel Carbon Debt.' *Science* **319**(5867): 1235-1238.
- Fischer, F. and Forester, J. (eds.) 1993. *The Argumentative Turn in Policy Analysis and Planning*. UCL Press, London.

- Gieryn, T. 1983. 'Boundary-Work and the Demarcation of Science from Non-Science: Strains and Interests in Professional Ideologies of Scientists.' *American Sociological Review* **48**: 781-795.
- Heclo, H. 1974. *Modern Social Politics in Britain and Sweden*. Yale University Press, New Haven, CT.
- Jasanoff, S. 1987. 'Contested Boundaries in Policy-Relevant Science.' *Social Studies of Science* **17**: 195-230.
- Keller, A.C. 2009. *Science in Environmental Policy: The Politics of Objective Advice*. MIT Press, Cambridge, MA.
- Kingdon, J. 2002. 'The reality of public policy making', in Danis, M., Clancy, C. and Churchill, L.R. (eds.) *Ethical Dimensions of Health Policy*. Oxford University Press, Oxford.
- Kingdon, J. 2011. *Agendas, Alternative and Public Policies: Updated Second Edition*. Longman, New York, NY.
- Koh, L. P. and Ghazoul, J. 2008. 'Biofuels, biodiversity and people: Understanding the conflicts and finding opportunities.' *Biological Conservation* **141**: 2450-2460.
- Krause, A. 2003. 'The European Union's Africa policy: the Commission as policy entrepreneur in the CFSP.' *European Foreign Affairs Review* **8**: 221-37.
- Levidow, L. 2013. 'EU criteria for sustainable biofuels: Accounting for carbon, depoliticising plunder.' *Geoforum* **44**: 211-223.
- Majone, G. 1989. *Evidence, Argument and Persuasion in the Policy Process*. Yale University Press, London.

- Melillo, J. M., J. M. Reilly, D. W. Kicklighter, A. C. Gurgel, T. W. Cronin, S. Paltsev, B. S. Felzer, X. Wang, A. P. Sokolov, and C. A. Schlosser. 2009. 'Indirect emissions from biofuels: How important?' *Science* **326**: 1397-1399.
- Palmer, J. 2010. 'Stopping the unstoppable? A discursive-institutionalist analysis of renewable transport fuel policy.' *Environment and Planning C: Government and Policy* **28**(6): 992-1010.
- Palmer, J. 2012. 'Risk governance in an age of wicked problems: Lessons from the European approach to indirect land-use change.' *Journal of Risk Research* **15**(5): 495-513.
- Palmer, J. 2014. 'Biofuels and the politics of land-use change: Tracing the interactions of discourse and place in European policy making.' *Environment and Planning A* **46**(2): 337-352.
- Pellizzoni, L. 2001. 'The myth of the best argument: power, deliberation and reason.' *British Journal of Sociology* **52**(1): 59-86.
- Ponte, S. and Daugbjerg, C. 2015. 'Biofuel sustainability and the formation of transnational hybrid governance.' *Environmental Politics* **24**(1): xxx-xxx
- Princen, S. 2013. 'Punctuated equilibrium theory and the European Union.' *Journal of European Public Policy* **20**(6): 854-870.
- RCEP. 2004. *Biomass as a Renewable Energy Resource*. Royal Commission on Environmental Pollution, London.
- Royal Society. 2008. *Sustainable Biofuels: Prospects and Challenges*. Policy Document 01/08. Royal Society, London.

- Searchinger, T., R. Heimlich, R. A. Houghton, F. Dong, A. Elobeid, J. Fabiosa, S. Tokgoz, D. Hayes, and T-H. Yu. 2008. 'Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land-Use Change.' *Science* **319**(5867): 1238-1240.
- Stone, D. 1989. 'Causal Stories and the Formation of Policy Agendas.' *Political Science Quarterly* **104**(2): 281-300.
- Tyner, W.E., Taheripour, F., Zhuang, Q., Birur, D., Baldos, U. 2010. *Land Use Changes and Consequent CO₂ Emissions due to US Corn Ethanol Production: A Comprehensive Analysis*. Department of Agricultural Economics, Purdue University.